

## **Section I**

### **National Weather Service Fire Weather Policy**

The National Weather Service (NWS) fire weather program is a very customer-oriented service, marked by a high degree of cooperation between the NWS and the customers who are the various Wildlands Management agencies (user agencies). As there is wide variance among individual agencies in the degree of sophistication in applying weather factors to their operations, the type of weather services required by user agencies varies considerably within the United States. Consequently, the fire weather programs of NWS offices are not suited to uniform descriptions.

The term fire weather is not limited to wildfire support but shall be interpreted to include all forest and rangeland management weather support services.

The fire weather service is the operational program that provides forecast, warning, and consultation services for the prevention, suppression, and management of forest and rangeland fires, and for a host of land management activities, such as planting and reseeding operations, nursery and plantation operations, insect and disease control, disposal of logging slash and forest residue, environmental protection including meteorological guidance for smoke management, and forestry engineering projects for watershed and recreational facilities.

The major objective of the fire weather service is to provide a service which will meet the meteorological requirements of Federal and state wildland management agencies in the protection and enhancement of the Nation's forest and rangelands.

## **Section II**

### **NWS Sterling (LWX) Fire Weather Policy & Philosophy**

The National Weather Service Forecast Office (WFO) in Sterling, Virginia will provide fire weather support in accordance with the National Weather Service Fire Weather Policy. This support will consist of daily fire weather forecasts during the fire season. Spot (non-routine) forecasts, fire weather watches, and red flag warnings will be provided on an as-needed basis at any time throughout the year.

Unless otherwise specified, forecasts are made to reflect the worst probable weather in terms of fire management, within the forecast zone. For instance, the daytime forecast will attempt to depict the hottest, driest, and windiest weather that is likely to be experienced in the wildland environment of a zone from 7AM to 7PM Eastern Standard Time. On occasion, this may be different from the general public forecast which emphasizes prevailing conditions for the area, and is often skewed towards the more populated areas in a county.

Though the routine forecast attempts to depict a worst case fire weather scenario for a given period, it in no way reflects all the local variations in weather that can have an adverse effect on fire behavior within a zone. Fire control officers should be familiar with typical weather variations across their district or forest such as those associated with land versus sea interaction, changes in elevation, and vegetation. The impact of seabreezes or mountain/valley winds should also be recognized. A spot forecast should be requested whenever local effects are suspected of creating difficult fire management conditions.



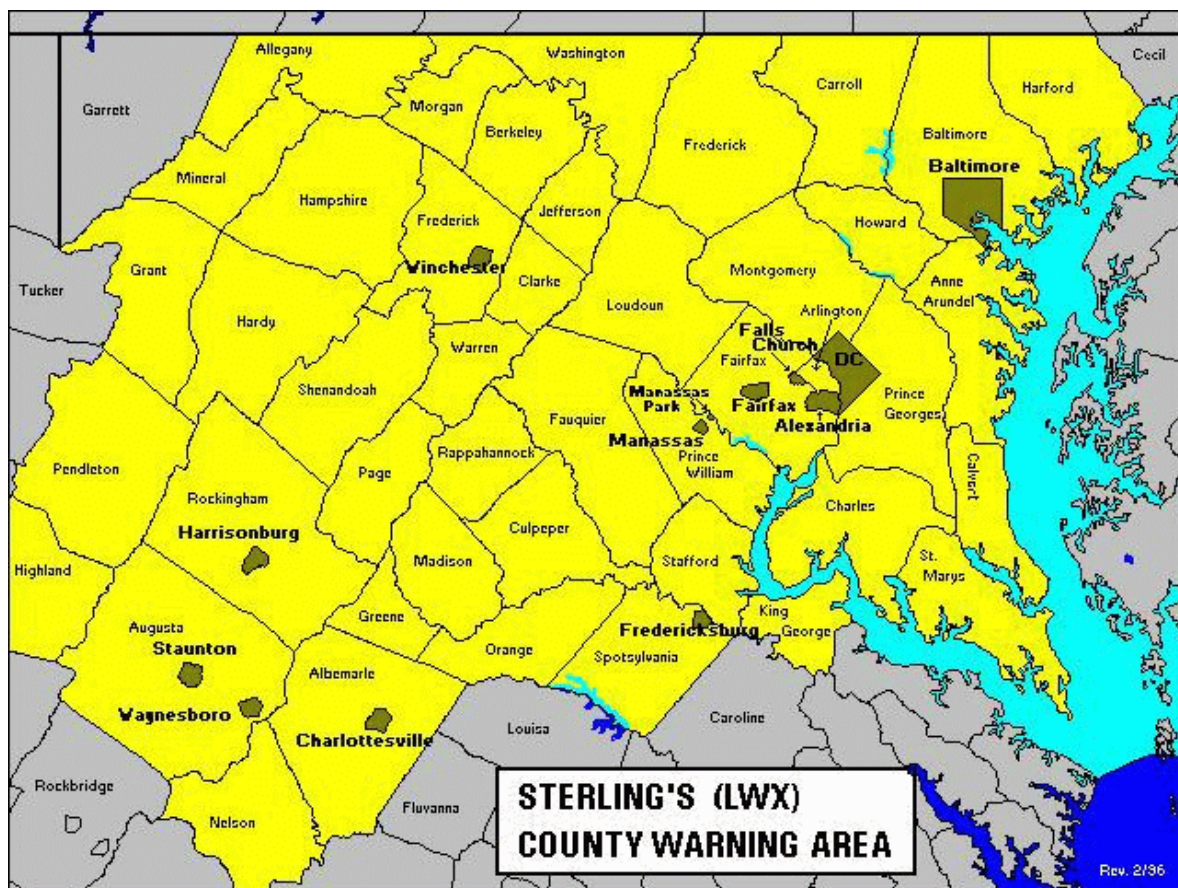
Over mountainous terrain, weather conditions vary considerably from site to site within a county. Routine forecasts for mountainous counties will be aimed at lower elevations where the most operations are likely to occur. As a general rule, high elevations sites will have lower temperatures on the order of 5 degrees per 1,000 feet in elevation. Fire officers are urged to obtain spot forecasts whenever terrain causes significant departures from the routine forecast.

### Section III NWS Sterling Forecast Area

The WFO Sterling county warning area (CWA) consists of:

- A) All of Maryland west of the Chesapeake Bay, except Garrett county
- B) North and Northwest Virginia
- C) The eastern panhandle of West Virginia
- D) The District of Columbia

**Figure 1**



*County Warning Area (CWA) of NWS Sterling*

**Table 1**

*The zone codes for all counties and independent cities in the NWS Sterling Forecast Area*

| <b><u>District of Columbia</u></b> DCZ001 |        | <b><u>Virginia</u></b> |        |
|---|--------|------------------------|--------|
| <b><u>Maryland</u></b>                    |        | Albemarle              | VAZ037 |
| W Allegany                                | MDZ501 | Alexandria             | VAZ054 |
| E & Central Allegany                      | MDZ502 | Arlington              | VAZ054 |
| Anne Arundel                              | MDZ014 | Augusta                | VAZ025 |
| Northern Baltimore                        | MDZ006 | Charlottesville        | VAZ037 |
| Southern Baltimore                        | MDZ011 | Clarke                 | VAZ031 |
| Baltimore City                            | MDZ011 | Culpeper               | VAZ051 |
| Calvert                                   | MDZ018 | Fairfax                | VAZ053 |
| Carroll                                   | MDZ005 | Fairfax City           | VAZ053 |
| Charles                                   | MDZ016 | Falls Church           | VAZ054 |
| Frederick                                 | MDZ004 | Northern Fauquier      | VAZ501 |
| Harford                                   | MDZ007 | Southern Fauquier      | VAZ502 |
| Howard                                    | MDZ010 | Frederick              | VAZ028 |
| Montgomery                                | MDZ009 | Fredericksburg         | VAZ056 |
| Prince Georges                            | MDZ013 | Greene                 | VAZ038 |
| St. Mary's                                | MDZ017 | Harrisonburg           | VAZ026 |
| Washington                                | MDZ003 | Highland               | VAZ021 |
| <b><u>West Virginia</u></b>               |        | King George            | VAZ057 |
| Berkeley                                  | WVZ052 | Loudoun                | VAZ042 |
| W Grant                                   | WVZ501 | Madison                | VAZ039 |
| E Grant                                   | WVZ502 | Manassas               | VAZ052 |
| Hampshire                                 | WVZ048 | Manassas Park          | VAZ052 |
| Hardy                                     | WVZ055 | Nelson                 | VAZ036 |
| Jefferson                                 | WVZ053 | Orange                 | VAZ050 |
| W Mineral                                 | WVZ503 | Page                   | VAZ029 |
| E Mineral                                 | WVZ504 | Prince William         | VAZ052 |
| Morgan                                    | WVZ051 | Rappahannock           | VAZ040 |
| Pendleton                                 | WVZ054 | Rockingham             | VAZ026 |
|   |        | Shenandoah             | VAZ027 |
|   |        | Spotsylvania           | VAZ056 |
|   |        | Stafford               | VAZ055 |
|   |        | Staunton               | VAZ025 |
|   |        | Waynesboro             | VAZ025 |
|   |        | Warren                 | VAZ030 |
|   |        | Winchester             | VAZ028 |

## **Section IV Description of Area**

The Sterling forecast area is located in the Mid-Atlantic portion of the continental United States. The topography varies from the coastal plain that covers the southeastern third of the forecast area, to the piedmont and foothills of central Maryland and north central Virginia, to the Appalachian mountains in the northwest third of the forecast area. Hardwood forests provide the majority of the vegetative coverage in the higher elevations.

## **Section V The Fire Season**

The “fire season” runs much of the year, but there are two distinct maxima of increased activity. These two periods are during the spring (*mid February thru mid May*), and the fall (*mid October thru mid December*). WFO Sterling will issue a fire weather forecast WBCFWFLWX twice a day. WFO Sterling will also issue NFDRS point forecasts WBCFWMLWX, along with as-needed Red Flag Warnings and Fire Weather Watches throughout the year. Spot Fire Weather Forecasts can be requested by Federal agencies at any time during the year. These forecasts must be for the Sterling forecast area.

## **Section VI The Daily Fire Weather Forecast Product (WBCFWFLWX)**

The fire weather forecast product will be issued by the Sterling National Weather Service forecast office for all of the counties in the forecast area. The forecast will be issued between 4:00 and 6:00 AM each morning and again between 2:00 and 4:00 PM each afternoon.

The morning fire weather forecast will cover specific conditions for a 36 hour period and will consist of three 12 hour periods (today, tonight, and the next day). The afternoon forecast will consist of four 12 hour periods (tonight, tomorrow, tomorrow night, and the next day). On critical weather days a headline may be included at the top of the product. The headline will be mandatory for Red Flag Warnings or Fire Weather Watches. A brief synopsis of the weather as it pertains to the forecast area will precede the forecasts. Following the three/four period forecasts, the product will also contain an extended forecast issued by WFO Sterling, and the NWS long range forecast for the area.

- A) Data Included in the Short Term Section of the Fire Weather Product will be broken down into several groups. Each county will have 12 hour periods. The data included will

be:

- 1) Cloud Amount
  - 2) Precipitation Type
  - 3) Chance of Precipitation
  - 4) Daytime Max Temperatures and Nighttime Minimum Temperatures (*deg F*)  
*also with the temperature change from 24 hours ago.*
- Daytime Minimum Relative Humidity and Nighttime Max (*in percent*)  
*also with the humidity change from 24 hours ago.*
- Surface Wind Direction & Speed (*using an 8 point compass in MPH*)  
*broken down to morning and afternoon during the daytime periods.*
- Precipitation Amount (*in inches*)
- Precipitation Duration (*in hours*)
- Precipitation Begin and End Times
- Daytime Mixing Height (*in feet*)
- Daytime Transport Wind Direction
- Daytime Transport Wind Speed (*in miles per hour*)
- Daytime Ventilation Index (*transport wind speed x mixing height*)
- Lightning Activity Level
- Daytime Haines Index for potential fire growth

- **Surface wind:** This is a 2 minute average of the 10 meter wind (33 feet). Direction is given using an eight point compass (i.e. N, NE, E, SE, S, SW, W, NW). Surface wind speed is in miles per hour. During the daytime periods, wind is broken down into morning and afternoon periods. For those that require 20 foot winds, the difference between 20 and 33 foot wind is typically only 10 % or less in moderate to strong winds.
- **Precipitation Duration:** The total number of hours of precipitation expected during the 12 hour period.
- **Precipitation Begin and End Times:** These are the start and end times of any expected precipitation. It does not necessarily mean that precipitation will occur continuously between these times.
- **Humidities:** The humidity values given are the relative humidity extremes expected. In the two daytime periods, they are the minimum relative humidity forecast. At night, they are the maximum value forecast.
- **Haines Index:** This index refers to the stability and dryness of the lower atmosphere. It was intended to measure the potential for fire growth with existing fires. It is calculated adding two factors. The first compares the atmospheric



temperature at 950 Mb versus 850 Mb. The second figures the humidity of the atmosphere at 850 Mb. This is a daytime index. A Haines Index of:

- 2 or 3 Indicates a very low potential for fire growth
- 4 Indicates a low potential
- 5 Indicates a moderate potential
- 6 Indicates a high potential for large fire growth
- \*\*\* A value of 5 or 6 indicates that prescribed burns may get out of control.

- **Lightning Activity Level:** The amount of lightning strikes anticipated.

- 1 No lightning
- 2 No lightning or a few scattered strikes
- 3 Scattered strikes
- 4 More numerous strikes
- 5 Frequent lightning

- **Mixing Height:** This is defined as the atmospheric limit above which vigorous mixing does not take place. The mixing height gives the potential of the atmosphere to disperse smoke. In general, with a forecast mixing height of 1600 feet (500 meters) or less, the fire control officer should consider moving a scheduled prescribed burn to a different day. Upper air sounding data is available between 8 and 9 AM Eastern Standard Time. This data can sometimes provide a more accurate mixing height than what is issued earlier in the morning on the daily fire weather forecast. Since vigorous mixing typically occurs during the daylight hours, this value is given during the daytime periods. At night, the value falls to the inversion height.
- **Transport Wind:** Defined as the average wind vector from the surface to the mixing height (more plainly, the direction and speed of the wind that will carry the smoke). Direction of the transport wind (where the wind is blowing from) and speed will be given. This is now given in miles per hour. To convert to meters per second, multiply it by 0.45 (roughly divide it in half). Since the mixing height used to compute this is a daytime index, this is also given for day periods only.
- **Ventilation Rate:** This is a combination of the Transport Wind (mph) and the Mixing Height (ft). It is computed by multiplying the two values. It measures volume of smoke moved by dispersion. Since the mixing height used to compute this is a daytime index, ventilation rate is also given for the daytime periods only.

## **B) The Extended Forecast**

At the end of the daily fire weather forecast, the extended forecasts are given. For the mid range, these will include cloud cover, precipitation, and

temperatures. For the long range, this will include deviations from normal for temperatures and precipitation.

## **Section VII**

### **The Digital Zone Forecast Matrices** (WBCAFMLWX)

In addition to the daily fire weather forecast, the Digital Zone Forecast Matrices (or AFM) are issued with each public forecast update with more time specific information. The AFM has the following helpful data broken down into **three** hour time periods:

- Temperature
- Dewpoint
- Relative Humidity
- Surface Wind Speed and Direction
- Cloud Cover

It also contains 12 hour forecasts for precip amount (or QPF - Quantitative Precipitation Forecast).

The AFM has a separate matrix for each county grouping. These groups are identified by county names as well as UGC codes at the top of each matrix. The matrices use a standard format and are well suited for ingest into local computer programs.

The AFM product (and instructions on how to interpret it), as well as all of the National Weather Service (Sterling WFO) forecast products, observations, climatology, and other relevant data can be found at our web page:

<http://www.weather.gov/washington> OR <http://www.weather.gov/baltimore>

## **Section VIII**

### **Spot (Non-Routine) Forecasts**

The spot forecast is a site-specific, localized weather forecast available for wildfire support. This forecast will include wind, temperature, and humidity forecasts, as well as any local topographic or special effects that may be present. It will normally cover a 12 hour period and will be issued upon request by the agency overseeing the wildfire. Spot forecasts will not be issued for planned or prescribed burns by non-federal agencies. Requests can be faxed or phoned in. If faxing a request, the user must also call to make sure the fax was received. After a reasonable time for creation, the Spot Forecast will then be faxed back to the user agency.

#### **A) Requirements for Issuance of a Spot Forecast**

Completion of the web based form located on our internet web site (<http://www.nws.noaa.gov/er/lwx/fire.htm>), or form WS Form D-1 (which needs to be faxed on completion) by the requesting agency. This will provide current weather information for the site-specific location. The requesting agency will provide the following information:

- Agency name
- Location (*Latitude and Longitude*) and Size (*acreage*) of the fire
- Elevation, Topography, and Geography
- A recent weather observation
  - In order to provide a more accurate forecast, weather observations from the fire site need to be given to the forecaster. At a minimum, these observations need to include a dry bulb temperature, a wet bulb temperature or relative humidity, surface wind speed and direction using a hand held anemometer unless otherwise indicated.
- Any additional information that would help the forecaster

## **B) Spot Forecast Product**

The duty forecaster will provide the following information in the spot forecast product:

- Time period of the forecast (*usually 12 hours*)
- A brief synopsis
- Relative humidity forecast (*Minimum for the day, Maximum for the night*)
- 20 foot wind forecast (*direction and speed*)
- Probability of precipitation
- Mesoscale features affecting the site (*i.e. thunderstorms, bay breeze*)
- Any other weather phenomenon deemed important by the duty forecaster including any watches, warnings, or advisories in effect for the area.

## **Section IX National Fire Danger Rating System (NFDRS) Forecasts**

NFDRS forecasts will be issued for any predetermined site from which an NFDRS observation is received, provided the observation is received on time, complete, and deemed accurate. The natural resource agencies will determine which observation sites (normally RAWS sites) will be NFDRS sites. Initiation of NFDRS forecasts for a new site will be coordinated with the NWS and the agency requesting new NFDRS service will provide the NWS with information about the site location. Forecasts will not be provided for sites with bad data. The NWS will notify the owner agency when bad data is received from a RAWS station.

In the Baltimore/Washington Forecast Office area, there are 5 NFDRS RAWS sites:

**180201** | *Green Ridge* | Allegany County | 996 ft | 39.67N | 78.44W  
**440402** | *Fort Valley* | Shenandoah County | 800 ft | 38.83N | 78.40W  
**440901** | *Headquarters* | Page County | 1200 ft | 38.67N | 78.37W  
**461101** | *Nathaniel Mountain* | Hampshire County | 3004 ft | 39.20N | 78.79W



**463501** | *Upper Tract* | Pendleton County | 1705 ft | 38.82N | 79.28W  
**461302** | **Martinsburg** | Berkeley County | 526 ft | 39.24N | 77.58W  
**181510** | **Cedarville** | Prince Georges County | 200 ft | 38.65N 76.82W

## **Section X**

### **Fire Weather Watches and Red Flag Warnings** (WBCRFWLWX)

Three specific conditions must be met (or expected to be met) concurrently for a Red Flag Warning (or Fire Weather Watch) to be issued. These conditions are as follows:

- ✓ Ten hour fuels must be below 8%
- ✓ Sustained surface winds 20 MPH or greater
- ✓ Relative Humidity below 30% for VA and MD, Relative Humidity less than or equal to 25% for WV.

NWS Sterling will access fuel moisture information by a phone call to VICC (Virginia Interagency Coordination Center), and/or the Maryland Department of Forestry, and/or the West Virginia Division of Forestry (WVDOF).

If, after being notified of low fuel moisture, NWS Sterling determines that the relative humidity/wind criteria may (or will) also be met, NWS Sterling will consult with the affected coordination centers and decide whether a FIRE WEATHER WATCH or RED FLAG WARNING is needed.

If a FIRE WEATHER WATCH or RED FLAG WARNING is issued, NWS Sterling will include a HEADLINE in the daily fire weather forecast as well as any spot forecasts that are issued during the event. Also a separate product called an RFW (**WBCRFWLWX / WWUS81 KLWX**) will be issued. This separate product will more specifically state the risks and what weather conditions are producing them.

A “**FIRE WEATHER WATCH**” is issued to alert the users to the possible development of a Red Flag event (as defined by the 3 criteria above) in the near future. This is usually, though not always, issued for the next day (Day 2).

A “**RED FLAG WARNING**” is issued to warn the users of an impending or on-going Red Flag event (as defined by the 3 criteria above). A Red Flag Warning will be issued immediately when Red Flag conditions are occurring or for impending Red Flag conditions when there is a high degree of confidence that conditions will develop within the next few hours.

## **Section XI**

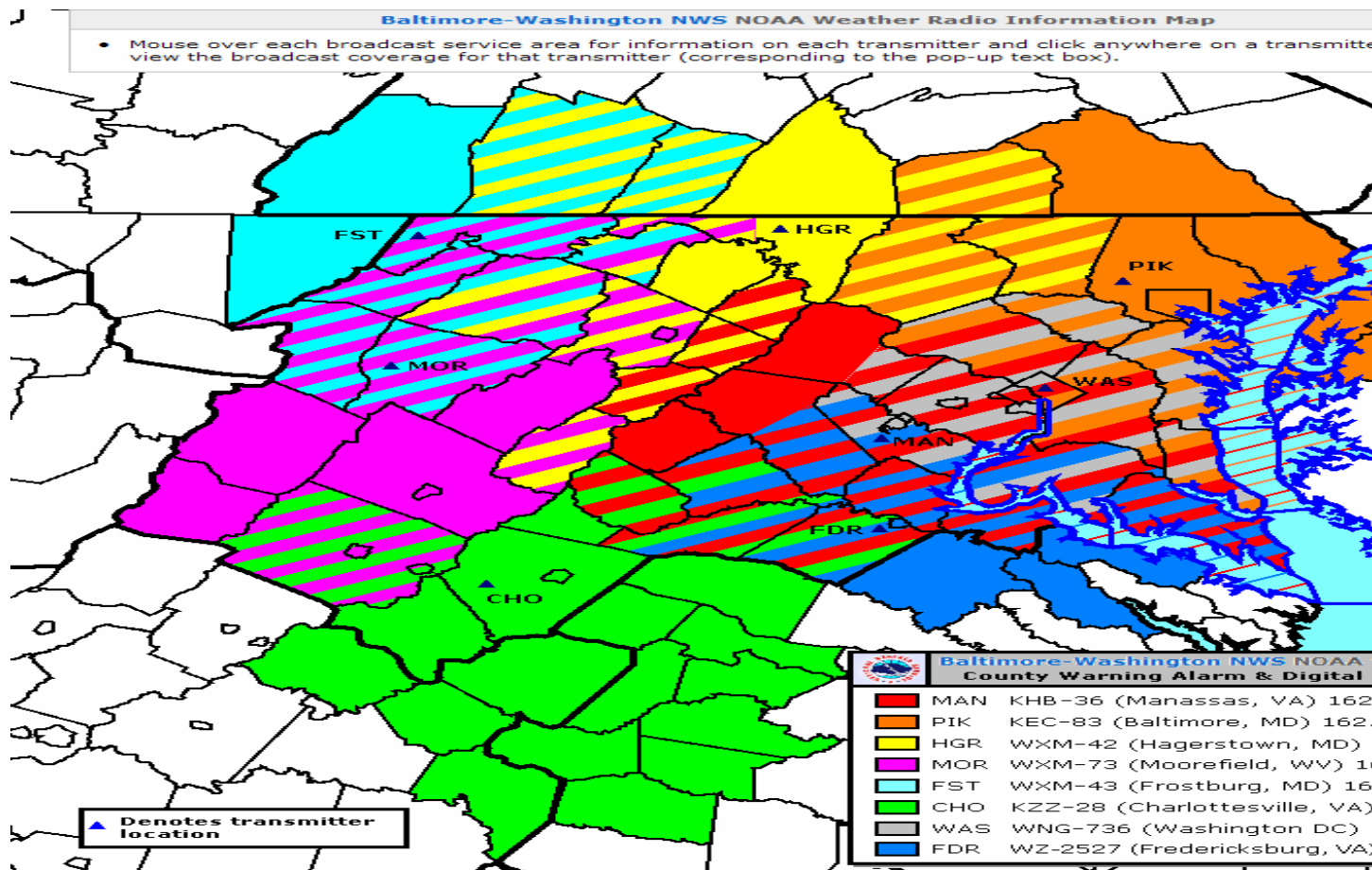
### **NOAA Weather Radio**

NOAA Weather Radio continuously broadcasts weather information on a special broadcast band. Maps of the areas covered by NWS Sterling's NOAA Weather Radio transmitters are included.

Following are NWS Sterling's NOAA Weather Radios and their assigned frequencies:

|    | <u>Location</u>     | <u>Station</u> | <u>Frequency</u> |
|----|---------------------|----------------|------------------|
| 1) | Manassas, VA        | KHB-36         | 162.550 MHz      |
| 2) | Pikesville, MD      | KEC-83         | 162.400 MHz      |
| 3) | Hagerstown, MD      | WXM-42         | 162.475 MHz      |
| 4) | Moorefield, WV      | WXM-73         | 162.400 MHz      |
| 5) | Frostburg, MD       | WXM-43         | 162.425 MHz      |
| 6) | Charlottesville, VA | KZZ-28         | 162.450 MHz      |
| 7) | Washington DC       | WNG-736        | 162.450 MHz      |
| 8) | Fredericksburg, VA  | WZ-2527        | 162.425 MHz      |

---



**Figure 2**

*NOAA Weather Radio Broadcast Coverage within the NWS Sterling Forecast Area*

## **Section XII**

### **Specialized Fire Weather Services & On-Site Meteorological Support**

Specialized meteorological services are those requiring a meteorologist to be away from the Forecast Office and/or, in non-emergency situations, to be on overtime. Special services include the Air Transportable Mobile Unit (ATMU) and other on-site meteorological services, weather observer training, weather station visitations requested by user agencies, and participation in user agency training activities.

User agencies pay overtime, travel and per diem cost for specialized services. Costs to be recovered from the user are calculated on the basis of expense reports submitted to the NWS Eastern Region Headquarters in Bohemia, NY by the servicing Forecast Office. Billing of user

agencies are handled by appropriate NWS administrative divisions based on these expense reports. Bills include a statement of services rendered, and dates and location of services provided.

Costs for specialized services pertaining to interagency training (i.e. ATMU) should be handled by cooperative agreement among the agencies involved with the specific training objective.

#### K) Air Transportable Mobile Unit (ATMU)

Modular ATMUs, are stored and dispatched from the USDA Forest Fire Cache in London, KY on a seasonal basis and from other state and federal fire caches around the country as needed. These units are available upon request for duty at an incident fire, critical prescribed burn, or other weather sensitive incident.

Each ATMU consists of seven modules. The unit comes equipped with an automatic weather station, theodolite with tripod and calculator for computing winds aloft, belt weather observing equipment, satellite receiving gear and laptop computer for display of weather graphics, nozzle and regulator for helium tank, plus office supplies and miscellaneous expendables.

The unit must be operated by a certified Incident Meteorologist (IMET) working closely with the Fire Behavior Analyst (FBA) in setting up the unit at the site.

Requests should be made through the US Forest Service Dispatch. Individuals making the request should provide the following information: (1) the name of the fire or incident, (2) location of the fire or incident, (3) directions to the place where the meteorologist is to report, and (4) name of the Incident Commander and the FBA.

The requesting agency is responsible for coordinating transportation of the ATMU and IMET to and from the incident. If commercial air is to be used for transporting the ATMU, arrangements should be made with the caching agency to repack or have hand carried module #5, which contains the automatic weather station recorder.

The requesting agency is also responsible for any storage of the unit while in transit, shelter of the meteorologist and unit at the site, provision of priority telephone access during certain short periods each day, 120V AC electrical power, and provision of a helium tank. The sheltered work area must be protected from heavy dust, and heated or cooled sufficiently to allow equipment and meteorologist to operate effectively. It must be free of standing water or condensation, approximately 50 square feet in size with a table and chair.

Upon arrival at the incident, the IMET will:

Based on information from initial contact with the Forecast Office, brief the Fire Behavior Analyst and Incident Commander on the current and expected weather

as it affects the fire.

Establish a schedule with the Incident Commander and FBA for written forecasts and formal briefings.

Request a briefing of the fire situation and potential behavior problems from the FBA. As time and resources permit, incident management should arrange for an areal inspection trip for the meteorologist, and be sure current fireline maps are provided to the meteorologist. If possible, the meteorologist should be assigned a radio with fireline frequency.

In cooperation with the FBA, the meteorologist will arrange for a schedule of observations from key points around the fire and from nearby lookouts and fire danger rating stations. On large incident fires, some personnel (at least two) should be permanently assigned to this duty. On smaller fires this information is provided by the Division Supervisors equipped with belt weather kits.

#### Fire Weather Training

NWS Fire Weather Meteorologists are available to assist in fire control agencies with training at fire behavior school and other weather related courses. Requests for assistance should be forwarded to the Fire Weather Focal Point at NWS Sterling.

#### Other Specialized Services

Other services include weather station visitations requested by user agencies, weather observer training and course development work. These activities would typically be conducted at user agency facilities.

## APPENDIX A

### NWS STERLING SITE INFORMATION

**MAILING ADDRESS:** National Weather Service  
Baltimore/Washington Forecast Office  
43858 Weather Service Road  
Sterling, VA 20166

#### CONTACTS:

Fire Weather Program Leader.....*Brian LaSorsa*  
Brian.Lasorsa@noaa.gov  
Meteorologist-in-Charge.....*Jim Lee*  
James.E.Lee@noaa.gov

The forecast office is staffed 24 hours a day, 7 days a week throughout the year, including holidays. Forecasters are available for special forecasts or consultations, conditions permitting. No forecaster is dedicated solely to fire weather products or services and staffing is at a minimum. Under severe weather conditions, forecasters may have to attend to other priorities. Extra staffing is generally available during administration hours (8am to 4pm Monday through Friday).

#### TELEPHONE NUMBERS:

**Administrative / Forecast Operations**..... (703) 996-2201  
(Direct forecast questions to the lead forecaster)  
**Severe Weather Reports**..... (800) 253-7091  
(Severe weather reports only!)  
**FAX**..... (703) 260-0809

THE ABOVE NUMBERS ARE **UNLISTED**. DO NOT RELEASE THEM TO THE PUBLIC!!

Our **public access phone** number is..... (703) 996-2200

#### BALTIMORE/WASHINGTON FORECAST OFFICE INTERNET ADDRESSES:

Both go to the same web site:

<http://www.weather.gov/washington>  
<http://www.weather.gov/baltimore>





## APPENDIX B

### SURROUNDING NWS OFFICES

Wakefield NWS: Larry Brown: *Fire Weather Focal Point (FWFP)*  
(To our Southeast) Larry.Brown@noaa.gov  
Tony Siebers: *Meteorologist in Charge (MIC)*  
Bill Sammler: *Warning Coordination Meteorologist (WCM)*  
10009 General Mahone Hwy.  
Wakefield, VA 23888-2742  
(757) 899-4200

Blacksburg NWS: Phillip Manuel: *FWFP*  
(To our Southwest) Phillip.Manuel@noaa.gov  
David Wert: *MIC*  
Phil Hysell: *WCM*  
1750 Forecast Dr.  
Blacksburg, VA 24060  
(540) 552-0084

Charleston NWS: Mark Pellerito: *FWFP*  
(To our West) Mark.Pellerito@noaa.gov  
Alan Rezek: *MIC*  
Jason Franklin: *WCM*  
400 Parkway Rd.  
Charleston, WV 25309  
(304) 746-0190

Pittsburgh NWS: Zaaron Allen: *FWFP*  
(To our Northwest) Zaaron.Allen@noaa.gov  
Acting MIC currently  
Richard Kane: *WCM*  
192 Shafer Rd.  
Moon Township, PA 15108  
(412) 262-1591

State College NWS: Bill Gartner: *FWFP*  
(To our North) William.Gartner@noaa.gov  
Bruce Budd: *MIC*  
Dave Ondrejik: *WCM*  
328 Innovation Dr. Suite 330  
State College, PA 16803  
(814) 231-2408

Mt. Holly NWS:  
(To our East)      Lee Robertson: *FWFP*  
Lee.Robertson@noaa.gov  
Gary Szatkowski: *MIC*  
Joe Miketta: *WCM*  
732 Woodlane Rd.  
Mt. Holly, NJ 08060  
(609) 261-6600

Eastern Region HQ: Harvey Thurm: *Program Manager*  
Harvey.Thurm@noaa.gov  
Airport Corporate Center  
630 Johnson Ave.  
Bohemia, NY 11716  
(631) 244-0124

NWS Headquarters: Paul Stokols: *Program Leader*  
Paul.Stokols@noaa.gov  
1325 East-West Highway  
Silver Spring, MD 20910-3233  
(301) 713-1677 ext 139

NIFC at Boise ID: National Interagency Fire Center  
3833 S. Development Ave.  
Boise, ID 83705  
(208) 387-5512

## APPENDIX C

### USER CONTACTS

#### Maryland

|   |  |
|---|--|
| DNR-Forest Service<br><i>HEADQUARTERS</i>   | Monte Mitchell: <i>State Fire Supervisor</i><br>MMitchell@dnr.state.md.us<br>Maryland DNR<br>580 Taylor Ave E-1<br>Annapolis, MD 21401<br>(410) 260-8503 [8:00am - 4:30pm]<br>(410) 315-3912 [emergency pager] |
| Western Region<br>(Garrett, Allegany,<br>Washington, &<br>Frederick)                  | Richard Lillard: <i>Regional Fire Manager</i><br>RLillard@dnr.state.md.us<br>3 Pershing Street<br>Cumberland, MD 21502<br>(301) 478-2976   |
| Southern Region<br>(Anne Arundel,<br>Prince Georges,<br>& Lower Southern<br>Maryland) | John Fisher: <i>Regional Fire Manager</i><br>JFisher@dnr.state.md.us<br>DNR Forest Service<br>Cedarville State Forest<br>10201 Bee Oak Rd.<br>Brandywine, MD 20613<br>(301) 645-4347 x207                      |
| -AND-   |  |
| Central Region<br>(Carroll, Baltimore<br>Harford, Cecil,<br>Montgomery, &<br>Howard)  | Also: John Fisher  |

#### Virginia

|   |   |
|---|---|
| Virginia Interagency<br>Coordination Center | Jason Steinmetz: <i>Coordinator</i><br>JSteinmetz@fs.fed.us<br>Fontaine Research Park<br>900 Natural Resources Drive Suite 800<br>Charlottesville, VA, 22903-0758<br>(434) 977-1375 ext 3450<br>(540) 798-1487 (cell) |
|---|---|

Shenandoah                      Jeff Koenig: *Fire Manager*  
National Park Service      Jeff\_Koenig@nps.gov  
3655 US Hwy 211E  
Luray, VA 22835  
(540) 999-3500

George Washington      Greg Sanders: *Fire Management Officer*  
& Jefferson National      GSanders@fs.fed.us  
Forest                      USDA Forest Service  
5162 Valley Pointe Parkway  
Roanoke, VA 24019-3050  
(540) 265-5220

### **West Virginia**

Department of              Ben Webster: *Chief*  
Forestry                      Guthrie Center  
State Capitol  
Charleston, WV 25305  
(304) 558-2788 (office)  
(304) 382-6827 (cell)

DOF Region 1              M. Rodger Ozburn  
Eastern Panhandle      M.Rodger.Ozburn@wv.gov  
& Northern WV              Regional Fire Specialist WV DOF  
Route 2 Box 1100  
Fairmont, WV 26554  
(304) 825-6983 (M-F 8-5)  
(304) 825-6987 (fax)  
(304) 282-1203 (cell)  
(304) 987-8607 (pager)

### **District of Columbia**

|                       |                             |                             |
|-----------------------|-----------------------------|-----------------------------|
| National Park Service | Don Boucher: <i>Chief</i>   | Jeff 'Zeke' Seabright, AFMO |
| National Capitol      | Don_Boucher@nps.gov         | Jeffrey_Seabright@nps.gov   |
| Region                | Division of Ranger Services |                             |
|                       | 1100 Ohio St, Room 357      |                             |
|                       | Washington, DC 20242        |                             |
|                       | (202) 619-7039              | (301) 432-6945              |

WIMS Helpline              (800) 253-5559



## Appendix D (SAMPLE PRODUCTS)

### FIRE WEATHER PLANNING FORECAST

.DISCUSSION...

HIGH PRESSURE WILL CONTINUE TO BUILD INTO THE AREA FROM THE WEST THROUGH THIS AFTERNOON PUSHING OFF THE COAST ON WEDNESDAY. RETURN SOUTHERLY FLOW WILL BRING WARMER AIR INTO THE REGION FOR THURSDAY. RAIN WITH SOME POSSIBLE SNOW FOR HIGHER ELEVATIONS ASSOCIATED WITH A COLD FRONT THAT WILL CROSS THE REGION ON FRIDAY.

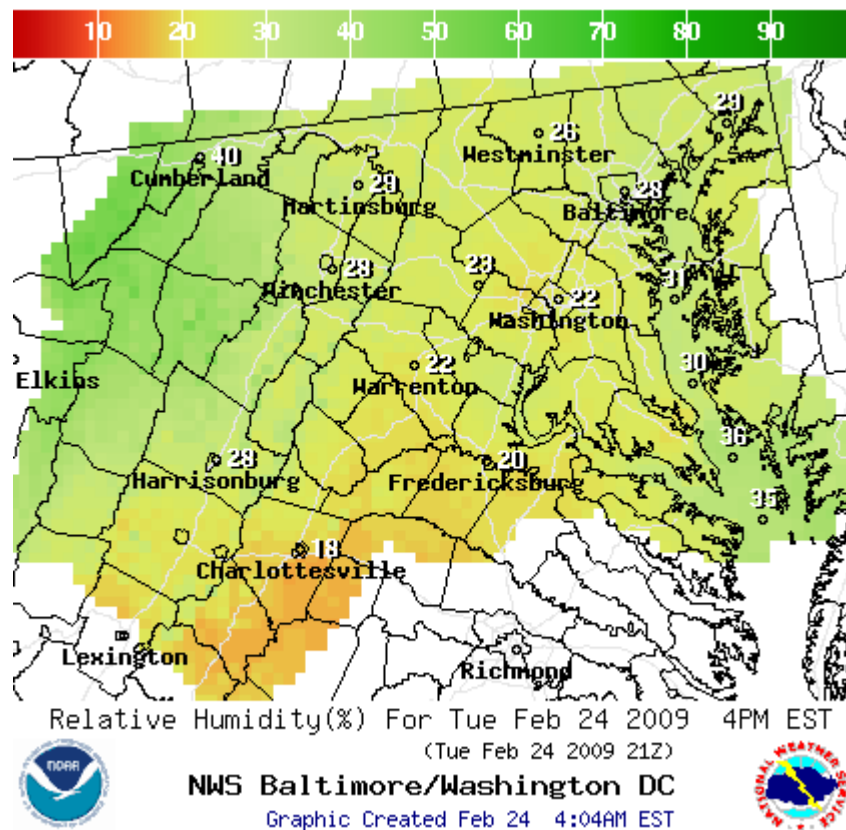
DCZ001-VAZ054-242115-  
DISTRICT OF COLUMBIA-ARLINGTON/FALLS CHURCH/ALEXANDRIA-  
INCLUDING THE CITIES OF...WASHINGTON...ALEXANDRIA...FALLS CHURCH  
551 AM EST TUE FEB 24 2009

|                        | TODAY   | TONIGHT | WED     |
|------------------------|---------|---------|---------|
| CLOUD COVER            | MCLEAR  | MCLEAR  | PCLDY   |
| PRECIP TYPE            | NONE    | NONE    | NONE    |
| CHANCE PRECIP (%)      | 0       | 0       | 0       |
| MX/MN TEMP (24H TREND) | 43 (+3) | 21 (-2) | 51      |
| MX/MN RH% (24H TREND)  | 20 (-6) | 56 (+6) | 23      |
| AM WIND (MPH)          | NW 13   |         | LGT/VAR |
| PM WIND (MPH)          | NW 11   | LGT/VAR | S 9     |
| PRECIP AMOUNT          | 0.00    | 0.00    | 0.00    |
| PRECIP DURATION        |         |         |         |
| PRECIP BEGIN           |         |         |         |
| PRECIP END             |         |         |         |
| MIXING HGT (FT-AGL)    | 4380    |         | 4390    |
| TRANSPORT WND (MPH)    | NW 12   |         | S 10    |
| VENT RATE (KT-FT)      | 43200   |         | 42440   |
| LAL                    | 1       | 1       | 1       |
| HAINES INDEX           | 4       | 4       | 4       |

REMARKS...NONE.



# GRAPHICAL FIRE WEATHER FORECAST





# FIRE WEATHER WATCH

...FIRE WEATHER WATCH IN EFFECT FROM THURSDAY MORNING THROUGH THURSDAY EVENING...

THE NATIONAL WEATHER SERVICE IN STERLING VIRGINIA HAS ISSUED A FIRE WEATHER WATCH...WHICH IS IN EFFECT FROM THURSDAY MORNING THROUGH THURSDAY EVENING.

STRONG WINDS BEHIND A DEPARTING LOW PRESSURE SYSTEM WILL COMBINE WITH LOW HUMIDITIES DURING THE DAY ON THURSDAY TO ENHANCE THE FIRE THREAT ACROSS MUCH OF MARYLAND...THE EASTERN PANHANDLE OF WEST VIRGINIA...AND NORTHERN VIRGINIA...AS WELL AS THE DISTRICT OF COLUMBIA.

A FIRE WEATHER WATCH MEANS THAT CRITICAL FIRE WEATHER CONDITIONS ARE FORECAST TO OCCUR. LISTEN FOR LATER FORECASTS AND POSSIBLE RED FLAG WARNINGS.

# RED FLAG WARNING

THE NATIONAL WEATHER SERVICE IN STERLING VIRGINIA HAS ISSUED A RED FLAG WARNING...WHICH IS IN EFFECT UNTIL 9 PM EST THIS EVENING. THE FIRE WEATHER WATCH IS NO LONGER IN EFFECT.

WEST WINDS OF 20 TO 30 MPH WITH GUSTS AS HIGH AS 50 TO 60 MPH WILL COMBINE WITH LOW RELATIVE HUMIDITY VALUES...DROPPING TO 25 TO 30 PERCENT IN THE AFTERNOON...TO PRODUCE AN INCREASED FIRE DANGER LATE THIS MORNING INTO EARLY THIS EVENING.

DESPITE RAIN THAT FELL OVER MUCH OF THE AREA ON WEDNESDAY EVENING...IT DOES NOT APPEAR THAT THE RAINFALL AMOUNTS WERE SUFFICIENT TO SIGNIFICANTLY MOISTEN FINE FUELS. ANY MOIST FUELS THIS MORNING WILL QUICKLY DRY OUT BY EARLY AFTERNOON DUE TO THE COMBINATION OF HIGH WINDS AND LOW RELATIVE HUMIDITIES.

A RED FLAG WARNING MEANS THAT CRITICAL FIRE WEATHER CONDITIONS ARE EITHER OCCURRING NOW...OR WILL SHORTLY. A COMBINATION OF STRONG WINDS...LOW RELATIVE HUMIDITY...AND WARM TEMPERATURES WILL CREATE EXPLOSIVE FIRE GROWTH POTENTIAL.













